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PATENT TRADEMARK OFFICE

Docket No: 9496/0L410

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: Takashi OHSAKI

Serial No. 09/615,104

Art Unit: 1754

Confirmation No.: 4085

Filed: July 13, 2000

Examiner: Stuart L. HENDRICKSON

For: **CARBONACEOUS NANOTUBE, NANOTUBE AGGREGATE, METHOD FOR MANUFACTURING A CARBONACEOUS NANOTUBE**

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**PENDING CLAIMS AS OF APRIL 7, 2003**

Hon. Commissioner of  
Patents and Trademarks  
Washington, DC 20231

Sir:

1. (Twice Amended) A carbonaceous hollow nanotube comprising:  
  
a plurality of disordered layers comprising a carbon material, said carbon material comprising hydrogen atoms and carbon atoms; and  
  
having an inner diameter less than or equal to 5 nm; and an outer diameter wherein the difference between said outer diameter and said inner diameter is equal to or less than 20 nm;

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wherein said nanotube is tube-shaped.

2. (Amended) The carbonaceous nanotube according to claim 1, wherein the difference between said outer diameter and said inner diameter is equal to or less than 10 nm.

3. (Twice Amended) The carbonaceous nanotube according to claim 1, wherein said carbon nanotube further comprises at least one transition metal atom.

4. (Amended) The carbonaceous nanotube according to claim 3, wherein said transition metal atom is iron.

5. (Twice Amended) A fiber aggregate, comprising: carbonaceous hollow nanotubes comprising a plurality of disordered layers comprising a carbon material and having an inner diameter of less than or equal to 5 nm; and an outer diameter wherein the difference between said outer diameter and said inner diameter is equal to or less than 20 nm;  
said carbon material comprising hydrogen atoms and carbon atoms;  
said carbonaceous nanotubes comprising at least 70 weight % of said fiber aggregate;  
said hydrogen atoms comprising 0.1 to 1 weight % of said fiber aggregate; and  
said carbon atoms comprising at least 98.5 weight % of said fiber aggregate;  
wherein said nanotubes are tube-shaped.

6. (Amended) The fiber aggregate according to claim 5,

wherein the difference between said outer diameter and said inner diameter is equal to or less than 10 nm.

7. (Amended) The fiber aggregate according to claim 5, further comprising at least one transition metal atom.

8. The fiber aggregate according to claim 7, wherein said transition metal is iron.

9. (Amended) The fiber aggregate according to claim 7, wherein said at least one transition metal atom comprising 0.005 to 1 weight % of said aggregate.